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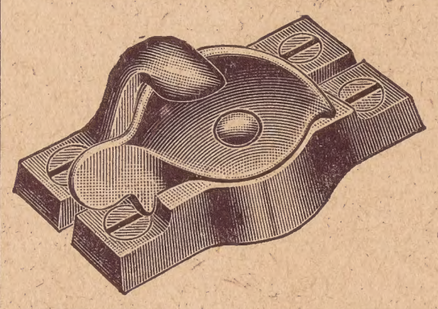
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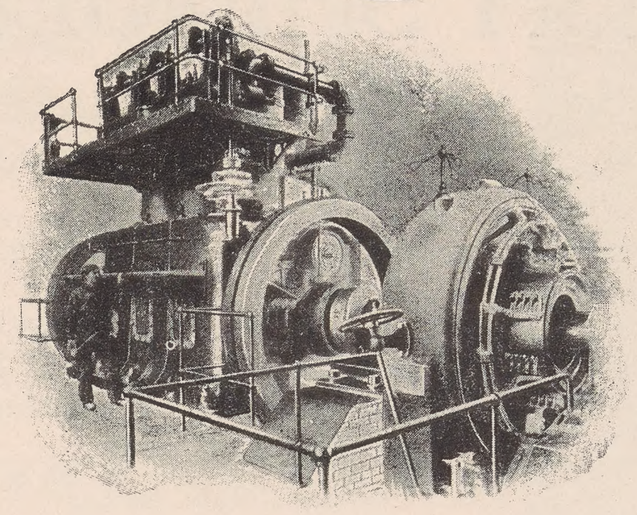

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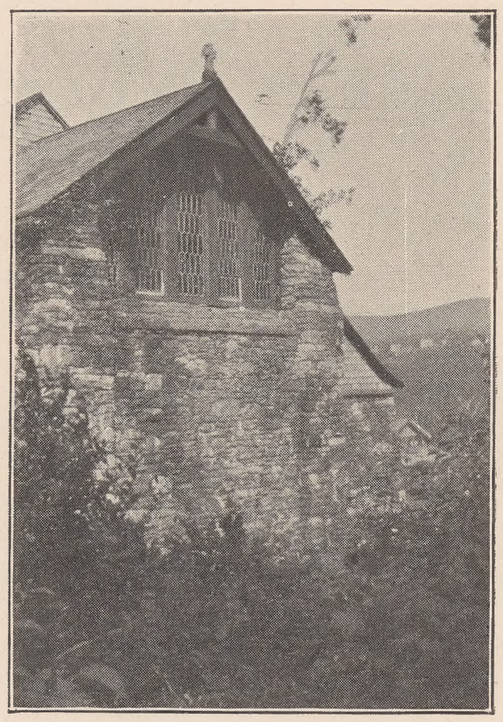

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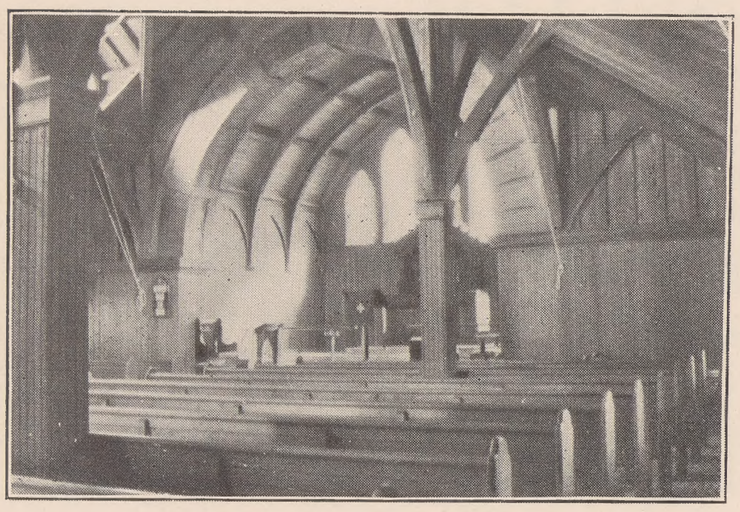

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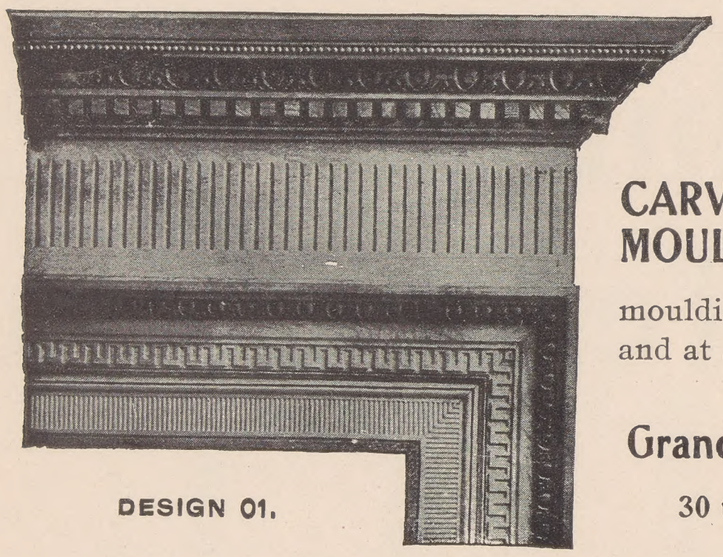

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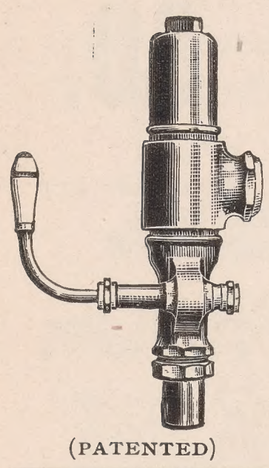

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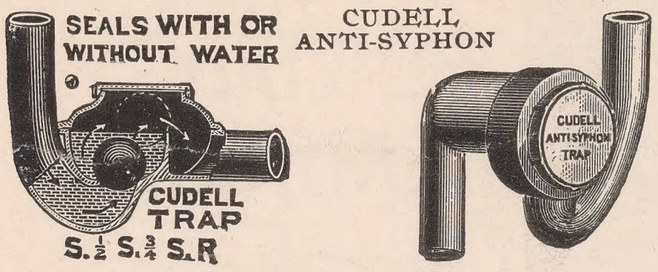

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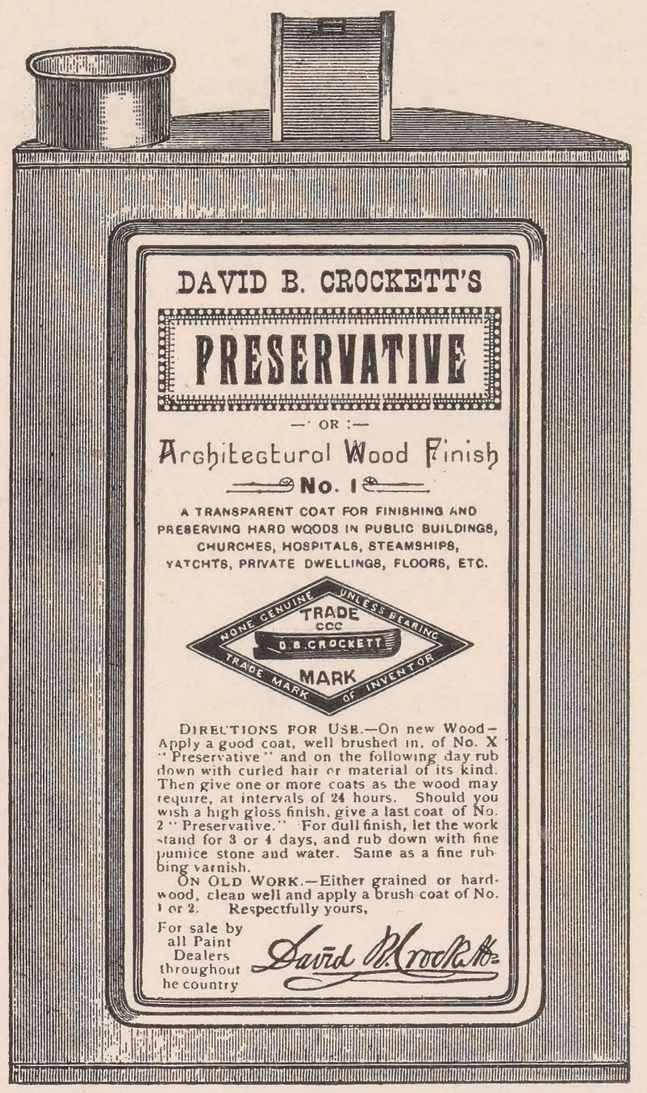
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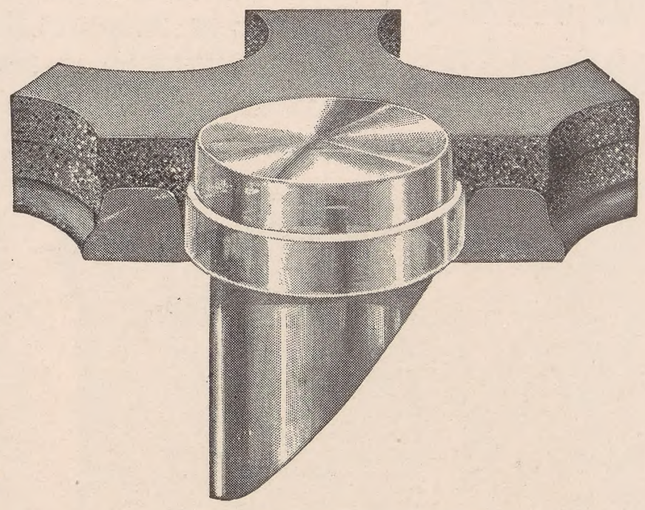

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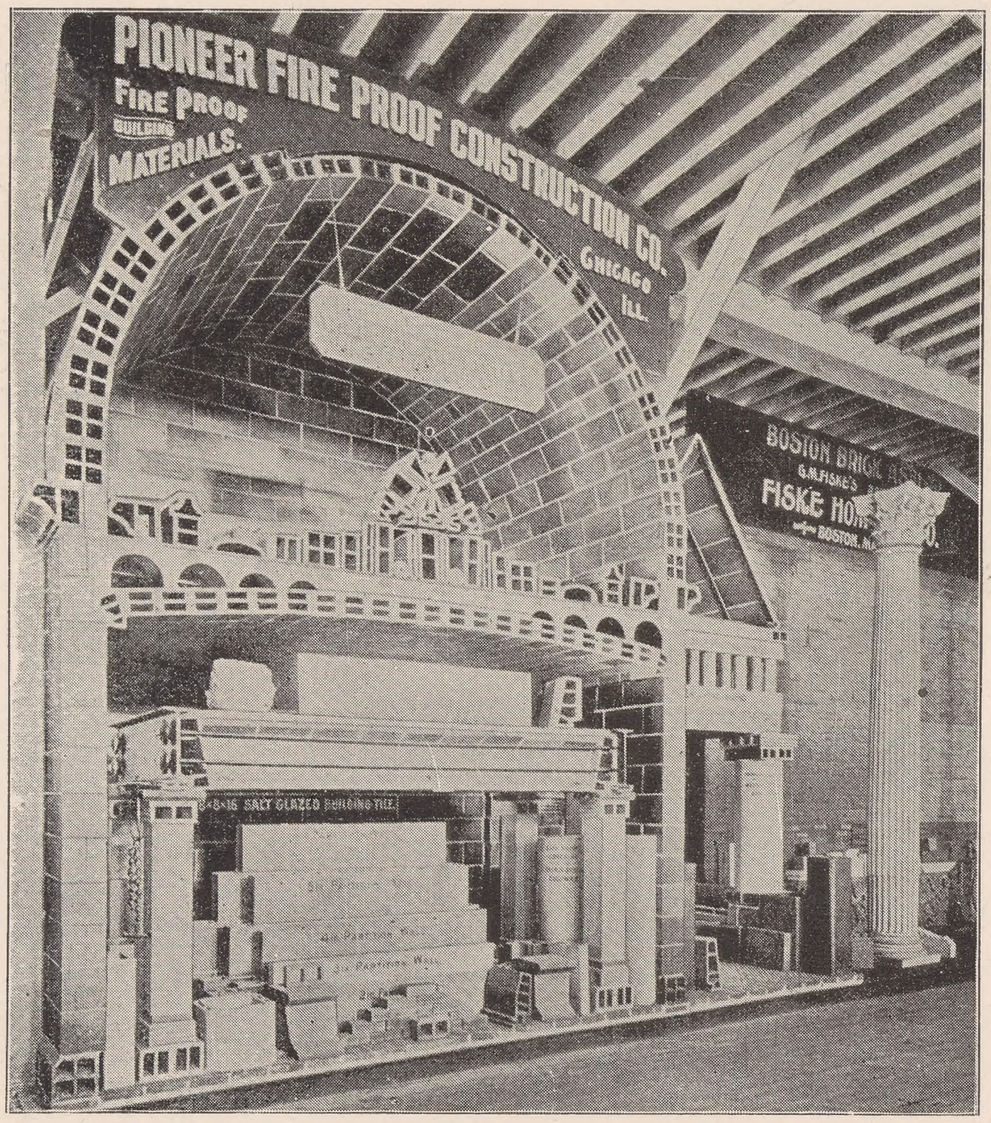

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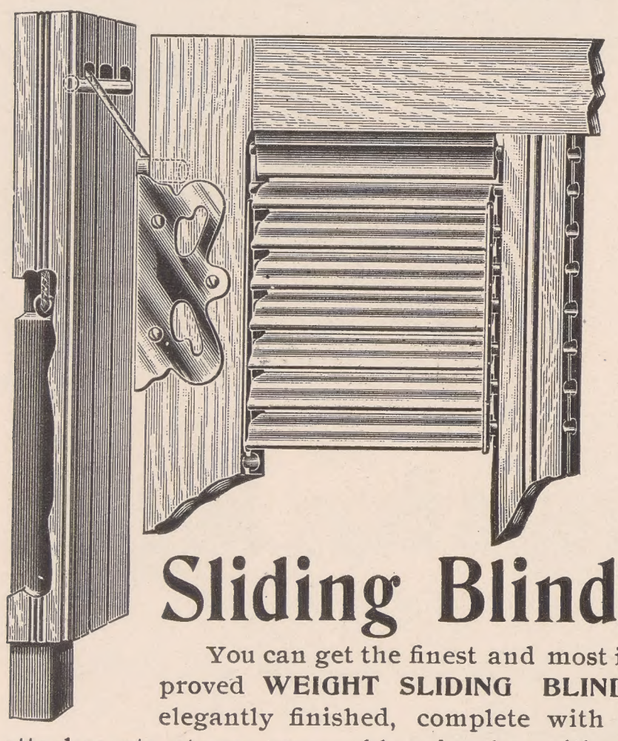

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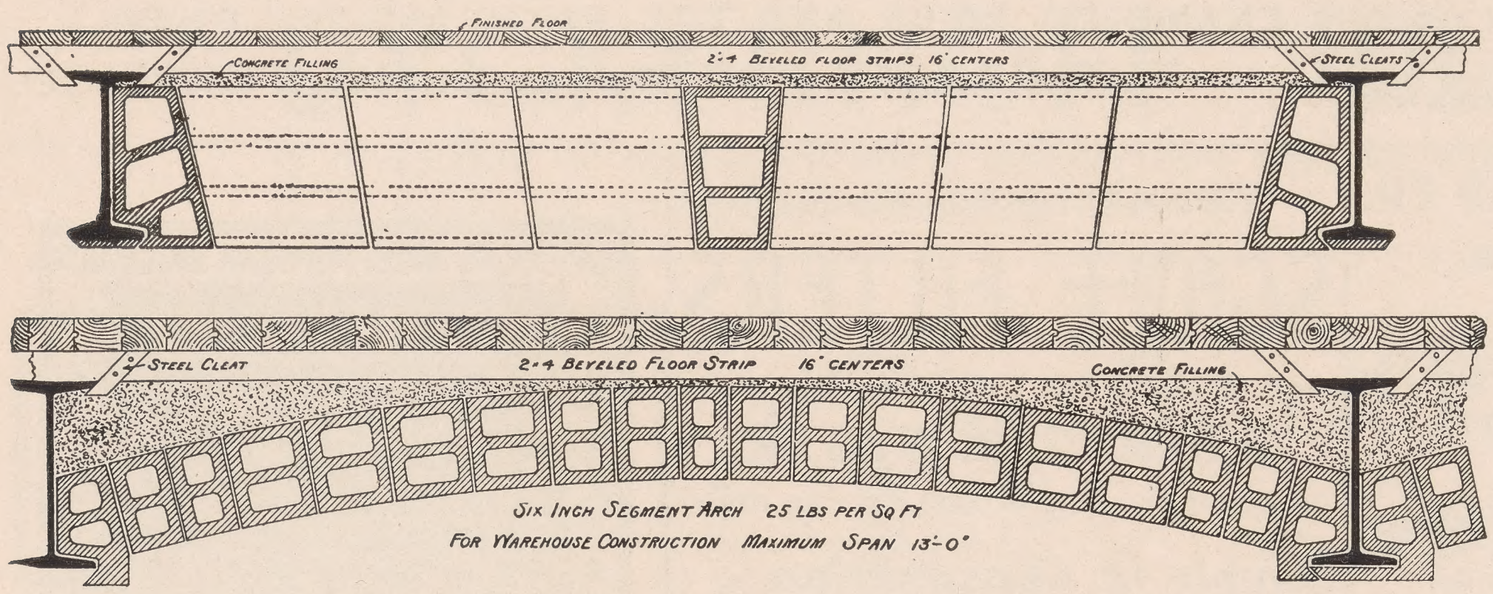
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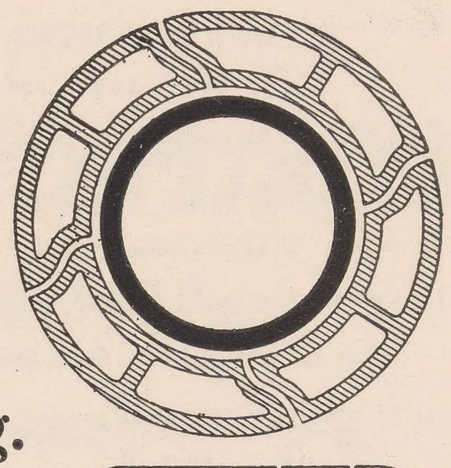

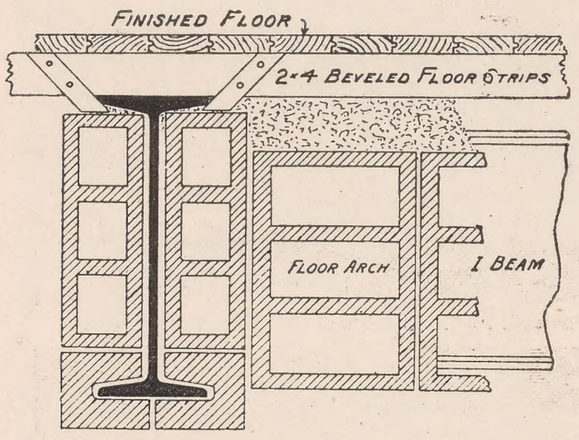

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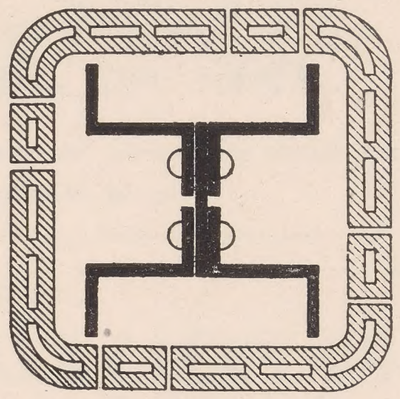

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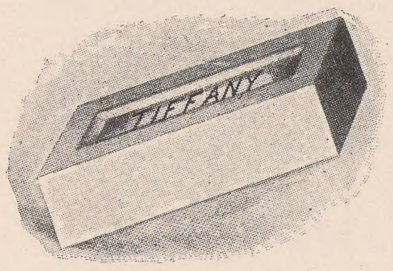

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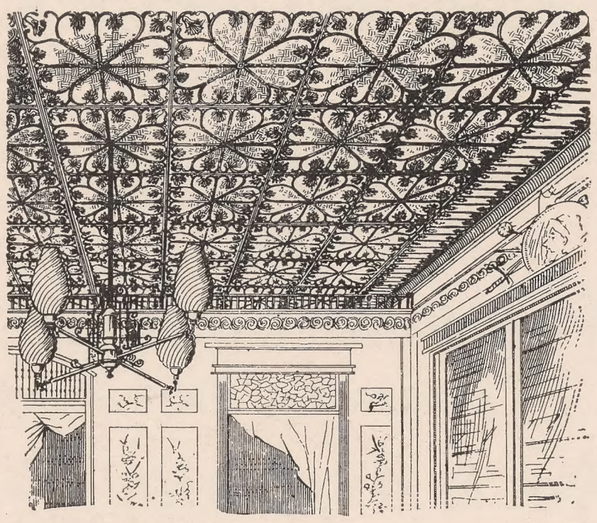

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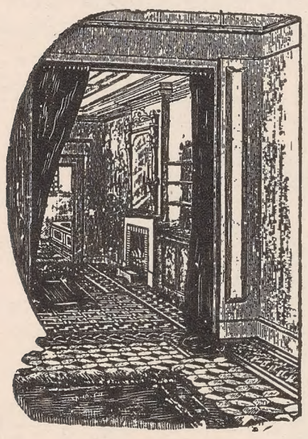

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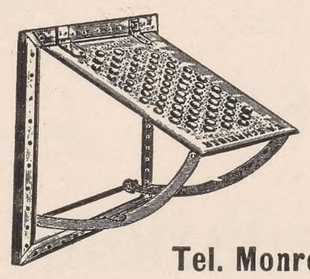

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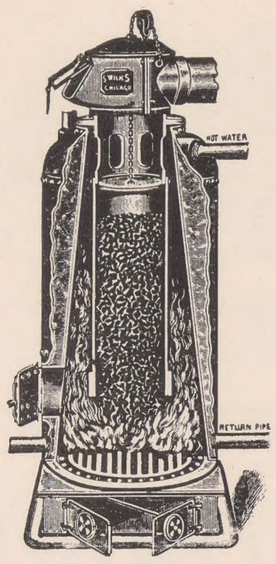

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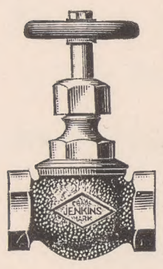

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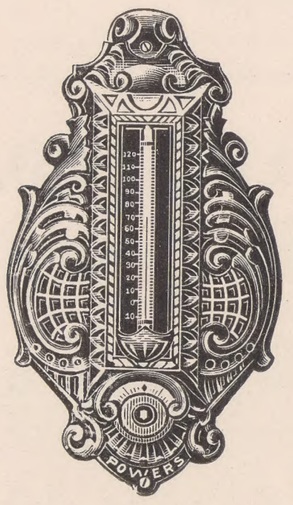

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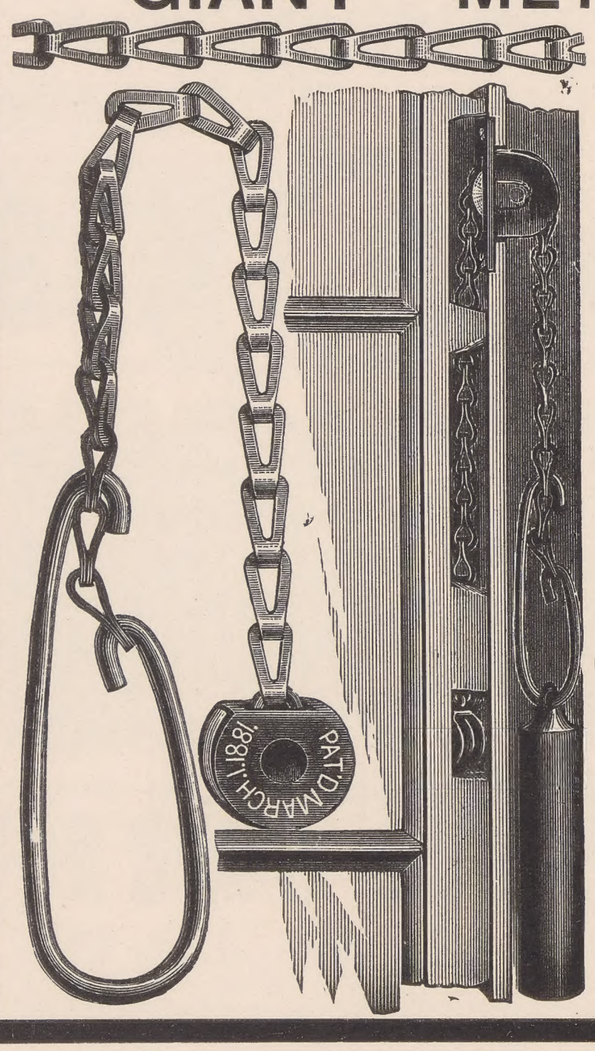

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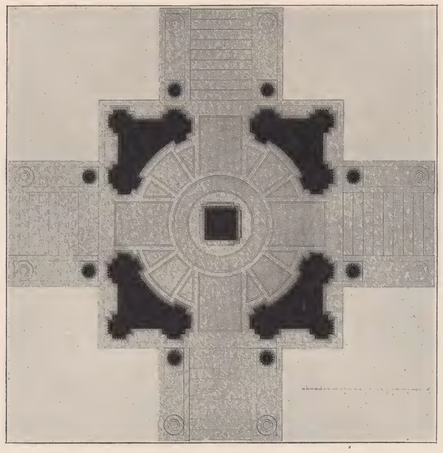

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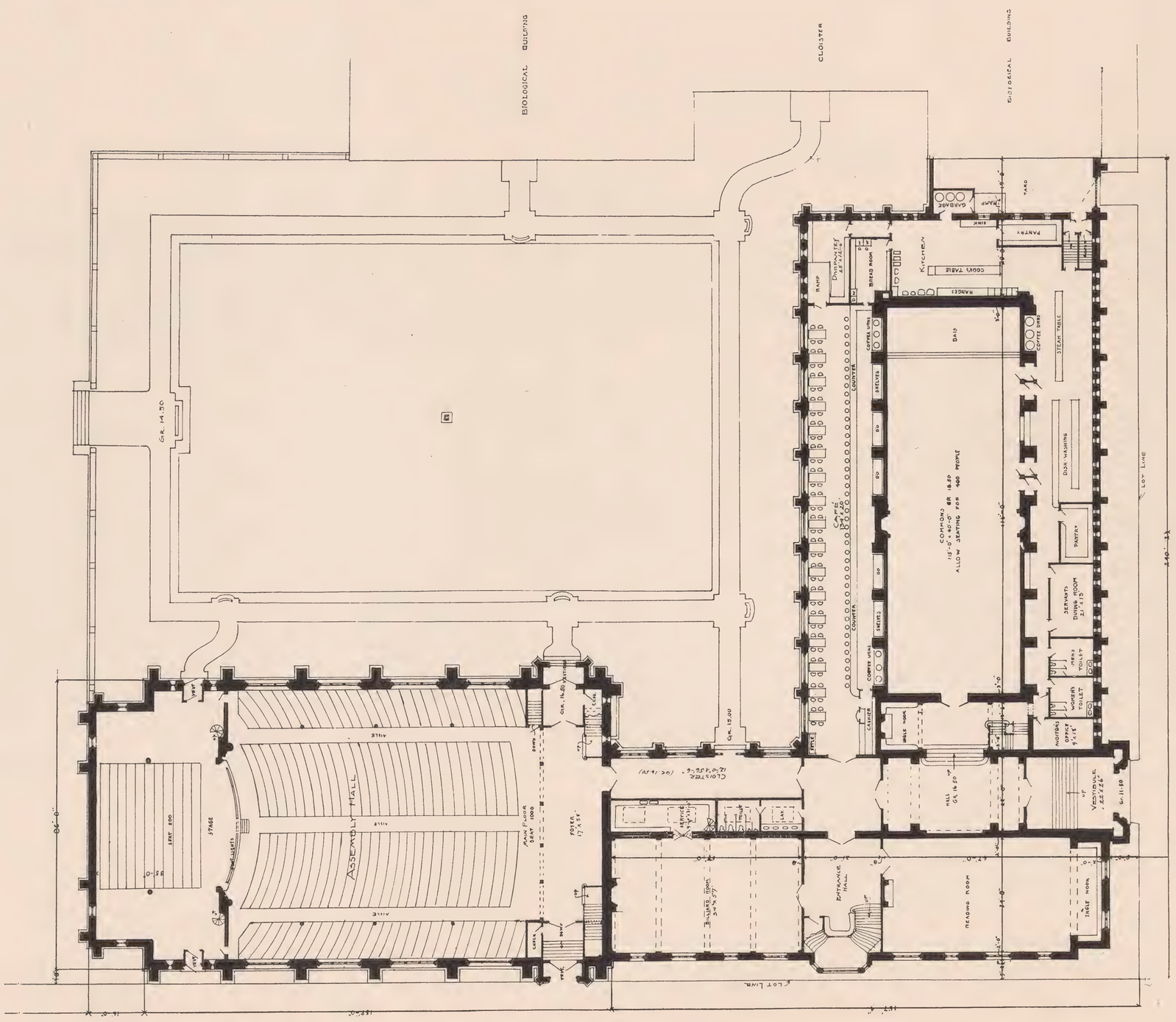

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Revival of License Law Agitation.

It is probable that bills providing for the examination and licensing of architects will be presented before the legislatures of a number of States this winter. The movement in New York State has taken definite shape in the appointment of a committee of fifteen by the Architectural League of New York to further the passage of such a measure. That a similar bill failed in passage through the veto of Governor Flower, who, notwithstanding the fact that the vote was unanimous in its favor in both houses, listened to the opposition of an architect, a contractor and an engineer, need not discourage its advocates. If the same interest had been exhibited by the members of the League and the Institute at that time, New York would in all probability have been the first State to possess such a law, but it was left for the Western New York Chapter and its president, W. W. Carlin, to press the matter at Albany, and New York city influence killed it. As there is no defensible argument against such a measure and its successful operation in Illinois for the past four years is in its favor, it is probable that any bill properly drawn and rightly presented with the active endorsement of the architects of any State will not fail to pass. It must be remembered, however, that bills must not be drawn so strongly as to savor of class legislation and still be definite enough to establish the law that only those who have had architectural experience can claim to be practicing architects. A legislature may look with favor upon a bill that seeks to protect the public from the inexperienced, that would look with suspicion on a measure that architects would deem technically perfect.

The Usual Result of Dealings With Mexico.

A letter which we print on another page may be found interesting reading to those who have not been tempted to extend their practice into Mexico, and at the same time a most substantial warning to avoid all transactions with the government of that country, as they would the purchase of a gold brick. Those who have had the misfortune to make plans for Mexican government buildings, without exception, as far as we have observed, have met with the same treatment as that to which Mr. Aiken has been subjected. We give the space required to the matter so that hereafter any victim of Mexican duplicity may be sure that he need not call upon the architectural press for sympathy, as he will deserve it no more than the gambler who is fleeced in the most notorious bagnio. In the matter in question, the Mexican Government is without excuse, as we are afraid Mr. Aiken is without hope of redress, though claims of much less justice have been presented before now and collected with the support of warships. This, we believe, is the third case in as many years where American architects have been misled by specious representations by high officials of the Mexican Government, with a uniform result. These implied contracts could not have been broken without the full concurrence of the highest officials, and it is only too probable that, as Mr. Aiken observes, there was no intention to carry out any contract, but a prearranged scheme to victimize the American architect from start to finish. The moral is, let all future propositions from the Mexican Government, of whatever nature, severely alone.

WARMING AND VENTILATING SCHOOLHOUSES.

BY FREDERICK BAUMANN, ARCHITECT.

THE principles of sanitation have, within the past forty years, taken a decided foothold in all communities. The result is that everywhere it is justly held to be of imperative importance to provide for the rising generation the best sanitary provisions in regard to schoolhouses. The principal demand without question is a *steady supply of wholesome fresh air uniformly distributed throughout the room, and alike an assured steady exit of the air contaminated.*

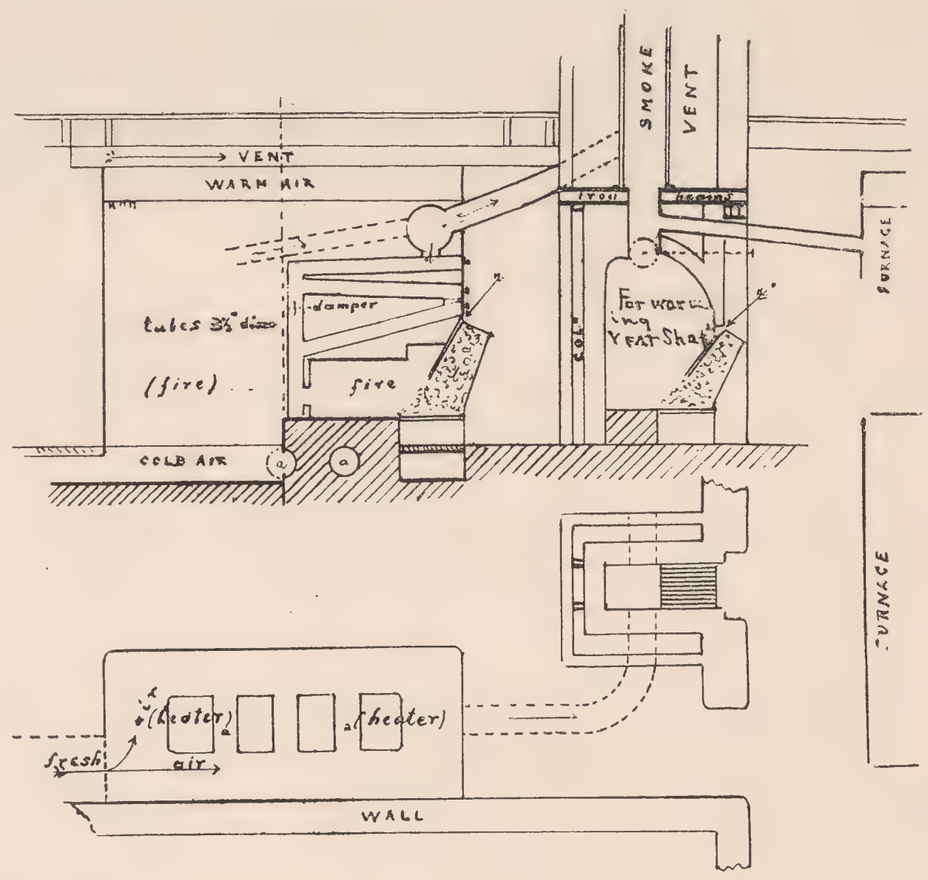
The problem, however, as a whole, is not of ready solution. Fair results have been obtained by degrees. Much has been accomplished, yet still more and more is in demand. At first it was assumed that *one* large, warm air furnace was sufficient for supplying *six rooms* of a size 27 by 34, 13 feet high. The result was an overcharging of this furnace in times of real cold weather. The desired fresh, warm air was then contaminated by contact with red-hot iron. This, however, was not the only fault. It would happen that on a stormy day the desired warm air did not at all enter the rooms exposed to the wind; for this wind, piercing walls and windows, *as it does,* would press across the room against the very wall whence the warm air is expected to proceed, so as to drive the proceeding current back into the very warm-air chamber. One-half of the building, the side exposed to the strong wind, is thus neither warmed nor ventilated, while the opposite side is over-supplied with heat. Occupancy is made intolerable in the one, inconvenient in the other half of the building. This most unsatisfactory state of things, during times of stormy weather now and then taking place, suggested the idea of setting two furnaces in place of one, each to supply but one-fourth of the building. This was an improvement. It abolished to a great extent the necessity of a frequent overcharging of a furnace. It furnished twice the amount of fresh air. But it did not — could not — conquer all the difficulties prevailing. Winds would still assert their disturbing influence on uniformity of temperature within the room. Since the ventilating opening instead of *opposite* is located *alongside* of the warm-air register, the inflowing air, in place of taking a full course to the opposite wall, is ever bent on taking the shortest course toward the ventilator. The result is a gradual diminution of temperature and of ventilation from the inner toward the opposite outer wall. The room is *not warmed to a uniform temperature.* The flow of warm air from the register is to an extent checked by the opposing wind, and the deficiency must be overcome by an increase of fire at the expense of wholesomeness of the air.

Defects and annoyances of this kind have induced a number of school boards, especially those of larger cities, to adopt a combined system of warming by means of steam-pipes, and of ventilating with air warmed in like manner, and propelled by means of power-fans. This system seems to have come to a fair degree of perfection. Yet, although without positive experience in regard to it, I venture to question whether it can be a finality in the line of success. Besides it is rather expensive, both in regard to outfit as well as running, and forbids itself for the largest number of schoolhouses.

In view of these facts I feel induced to bring before the public a different kind of furnace, in which the fresh air is but *indirectly* warmed, inasmuch as it is not brought in direct contact with the walls of a stove or furnace. (1.)*

PROPER LOCATION OF INLET AND OUTLET.

Supposing the venting shaft to be located, as it generally is, nearest the most protected corner of the room, the most proper place for the inlet of warm air would undoubtedly be at or nearest the corner diagonally opposite. The flow of air thence proceeding could never be stopped by a wind blowing from any quarter. A wind striking this corner would even have the effect of an increase upon it. It would even create a slight vacuum with the room nearest the walls which it strikes. The warm air would thus increase in its rapidity of inflow with the power of the wind, while an opposite wind would have no effect. In theory, therefore, the very extreme corner of a room would be the most proper place for the inlet-flue of warm air. In practice, however, the case is different. Not because the warm air would be cooled in its course — there is a ready way of obviating this (2), but because generally it is too inconvenient and expensive, or both. Furnaces should not be placed and managed within main basement rooms at the corners of the building, because these rooms are imperatively required for secondary school uses; nor can they be placed in rooms expressly built for the purpose at the outside of the building, without materially enhancing its cost, and in either case the inconvenience in attending would be against them. These circumstances make it in a



manner imperative to not change the locality usually had for the furnaces. The inlet-openings for warm air must remain in an inner wall and in opposition to the windows. But for the purpose of efficient ventilation the apertures for receiving fouled air must be located at places *opposite the inlet-openings* for warm air, in manner shown in the illustration here given.

This illustration shows part of a twelve-room schoolhouse which is supposed to be warmed by five of the new kind of furnaces. Each such furnace is but a sort of tight iron box, having chamber for cold air at base and one for warm air at top. Both chambers are connected with each other by means of *metallic tubes,* in which the air becomes warmed by contact with their inner wall surfaces during its course of passage from the lower to the upper chamber. These conducting tubes should be of *copper,* not soldered, but rolled from the hot metal into their tubular form [Mannesmann process, a factory being in operation near New York], copper being preferable because of its great receptibility and conductivity of heat. The exterior surface of their walls is heated by radiation from the two heat producers (stoves) which occupy the entire central part of the furnace. It is also heated by direct contact with the heated air, the effect of this being enhanced by humidity produced from an ample application of water into narrow gutters established. The heat penetrating the walls of the copper tubes warms the cold, fresh air within them as it contacts with their inner surfaces. It rises and is distributed as usual. The heat being communicated to the fresh air by contact merely, it is evident that the conducting pipes be narrow, their diameter not exceeding, say, one-thirtieth of their length. They can be readily affixed at their lower end. The upper end, however, should be free within sockets affixed to the ceiling partition of the directly heated space, in order that all of them may expand freely. It seems to be important that the aggregate area of all conducting tubes be about four times the area of the warm-air flues required in the case, so that, if the average velocity of currents within these be assumed at twelve feet the velocity within the tubes would be three feet per second, slow enough for allowing sufficient communication of the heat. It is evident that air thus warmed can never be burnt, and that the increased quantity required, because of its lower temperature, enhances the purity of the room's atmosphere.

VENTILATION.

Two openings located under windows opposite to the inlet of warm air allow the fouled air in each room to seek emission through the ducts arranged between the floor joists. Following these ducts and their extensions below the ceiling of wardrobe-

* For explanation of this and similar reference figures, see "Addenda" at end of this article.

rooms, the fouled air enters the upright ventshaft, in which it *ascends, confined by itself,* to the top of roof. Arrangement for the purpose is shown by a special section of the ventshaft in line "a b." It is considered to be of serious importance to positively keep ventshafts separate for each room. No less important it is to contribute some heat to the escaping fouled air, so that its ascent be assured. This is readily done by locating the smoke flue within the ventshaft at its very center, this being a device of old date. It should be considered that the more ample the ready escape of fouled air the more ample also the ready influx of warm, fresh air, and vice versa. This smoke flue may be constructed of tubing made of fire-clay. It may be started upon a pair of iron bearers, and for cleansing purposes have a short downward extension, with a stopper. The extra furnaces placed below this extension, within the ventshaft at its base, as shown, will serve for warming the air within it for purposes of ventilating the rooms at times when the furnaces proper are not in operation. To still more enhance such ventilation, in extreme cases, the hall furnace may be set agoing. Fullest summer ventilation may be had by opening windows, as usual.

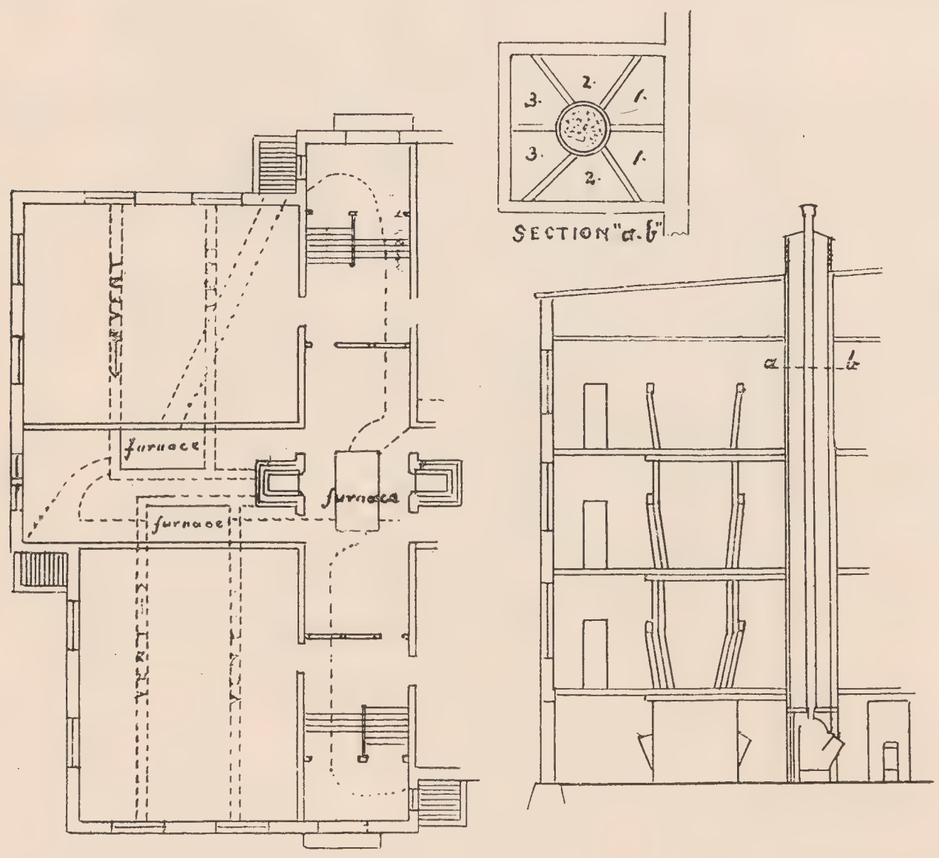
SMOKE CONSUMPTION.

The device for consumption of smoke is very simple, though most effective. An efficient base-burner is obtained by feeding the coal through a bucket which is shown in the illustration. The air passing through the cavity formed by its double back becomes heated enough in its passage for a most ready combination with the floating carbon proceeding in form of smoke from the burning coal. It thus burns the smoke most satisfactorily.

Buckets thus provided and attached have been in use and ever so with good effect. They are not a mere theory. I have repeatedly employed them and know what they are. It would seem to be singular in fact that they have not found some sort of general introduction (3).

RESUME.

It would seem to be self-evident that furnaces efficiently arranged and constructed in the manner above briefly described would be a desideratum for purposes of warming schools. The air thus but moderately warmed and most profusely applied would be even more agreeable to and wholesome for the human system than air warmed by steam-pipes. Ventilation being had, and its current assured as above explained, failure would seem to be out of question. The only difficulty for the present in the way of their introduction would appear to be a want of positive experience as to the exact compass of such furnaces for a given amount of work. That this difficulty can, however, not be great,



is made certain by the experience had some forty years ago in attempting to warm *six such schoolrooms* by means of one *small furnace* of a similar kind. Why should not two such furnaces, improved in size and construction, be sufficient for the occasion? It must be hoped that some enterprising furnace manufacturer will undertake it with the success due to the cause.

(*Offset*).—The main difficulty in the way of progress in warming and ventilating schoolhouses appears to be in the prevailing mode and manner in which architects generally make their specifications. Confessing want of information on the subject, they wantonly leave it to the bidder to offer his own solution of the problem. His proposal is to be accompanied by a detailed specification. The result is what everybody knows, or ought to know. The lowest bidder carrying off the prize may be the merest fraud. The honest tradesman is too often hopelessly overridden. For the sake of remaining on the market he is bound to somehow follow in the wake of his more successful competitor. And the trade gets "demoralized." All this would be different if the architect were bound to and did know his business to its limits. It is, I trust, his full and sober duty to be informed not merely of the principles underlying, but also of the practices constituting any and all trades directly contributary to a building. This refers to warming and ventilating as well as it does to masonry, carpentry, ironwork and other trades. No exception can justly be made. True, there is today a very great deal required for an architect to know, perhaps more than convenient for many. But he is, I trust, in this respect not more severely taxed than are lawyers, physicians and progressive artisans. Each and all of these men must nowadays be possessed of knowledge manifoldly deeper and more complicated than was that of their ancestors but half a century ago. I doubt the practicability, if not the possibility, of shifting the responsibility connected with the professional acts of the architect. It is, and will remain, with the one who ought to be and is regarded as the originator of the plans and everything therewith connected. Common law holds the architect accountable for his professional acts. This sound principle has ever been upheld by legal decisions rendered. It will be fully developed by more of such, which will be rendered upon occasion. But ought this matter of responsibility to be discouraging to the honest architect? I trust not. On the contrary he will be proud thereof, and not cowardly shrink therefrom. He will be aware that a knowledge of this state of things on the part of the public, holding the architect legally bound to be a master of his profession to its very limits, would be to his own true benefit (4). The architect, in fact, should take up this and every other improvement in warming and ventilating, and specify accordingly.

PROBABLE PROGRESS IN THE FUTURE.

The immense progress in practical science made within the recent decades encourages to a belief in the probability that the time is not so very remote when there will be a process in use by which the gross of the latent energy dwelling in coal will be at once, by one process, converted into electricity. As the case now is, about five-sixths of this energy is lost in the process of converting it into motive power, and so much more of this is lost by its conversion into electric energy, that this energy is but the fortieth, to at most the twenty-fifth part of that dwelling in carbon. It is to be hoped that by means of a direct process some ten times the amount of this energy may be obtained for actual use.

Upon the arrival of this happy time there will be not any more the usual oppressive toil required on processes of warming. All-domineering electricity will then do the work in a far easier, cheaper and cleanlier manner. But no change ought to be expected as to the principles governing the ascent of warm air currents in defiance of wind and weather, and the ready expulsion of vitiated air through a properly located and well-apportioned ventilator.

ADDENDA.

(1) The idea is not new. A furnace of the kind was introduced some forty-five years ago. It delivered the finest kind of warm air. Its failure was due to three causes: *first,* it was brought into an impossible competition with common furnaces, though, at best, it could not furnish much more than one-half of the amount of heat. *Second.* It was put in position to warm six rooms at once, a position in which every other kind of furnace, no matter what its productivity, has equally failed. *Third.* The parties trying to introduce it did not seem to have the remotest acquaintance with the particular branch of science.

(2) I did succeed in efficiently protecting vaults located within the very wall-corners of a building against the effect of cold winds. The walls, but 8 inches thick, were plastered and then lined with hollow tiles; another coat of plastering was applied, lastly another lining with a third coat of plastering. The result was that a subsequent northwest blizzard, at a temperature of 25 degrees below zero, failed to have a marked effect in lowering the temperature of air in the vault. No condensation of vapor in the air entering from the warm room in the morning when a vault was opened, took place. Subsequently I located in this manner the warm flues to a two-story schoolhouse in the very corner of the building, with a satisfactory result. Neither did I hesitate to locate ducts, for air warmed by

steam, against an exterior wall, nearest the corners, for purposes of successfully warming and ventilating a large room of an asylum. Ventilating flues in an exterior wall, without being thus shielded, are ever worthless.

(3) Even anthracite coal fires are greatly enlivened by the use of such a bucket. Some twenty years ago I applied one on a kiln used for drying malt. This kiln was built of brick and had a large grate, but it failed to yield the desired heat. For experiment a bucket was made and applied. The result was an extraordinary flame, extending to a height of not less than twelve feet. In less than fifteen minutes the heat developed had grown so intense that there was danger of scorching the malt, though some twenty-five feet distant from the grate. For want of dampening arrangements it became necessary to withdraw the bucket.

Another mode of smoke consumption was found, some ten years prior to the above experiment, with burning petroleum. For some purpose a hot fire under a novel boiler was required, and crude petroleum employed. It was dripping into a shallow pan perforated with stumps of gas-pipes. The design, however, proved worthless. The cold air rushing through the pipe-stumps would not combine with the vapor profusely proceeding from the petroleum. I judged at once that it was called for to heat the air prior to its passage through the petroleum pan. This was done by means of a small bucket filled with glowing charcoal and placed directly below the pan. The immediate result was the brightest and hottest kind of flame rushing upward, devouring at once the strings of carbon first produced and hanging within the slot. Combustion was thus made perfect by the most simple and inexpensive means.

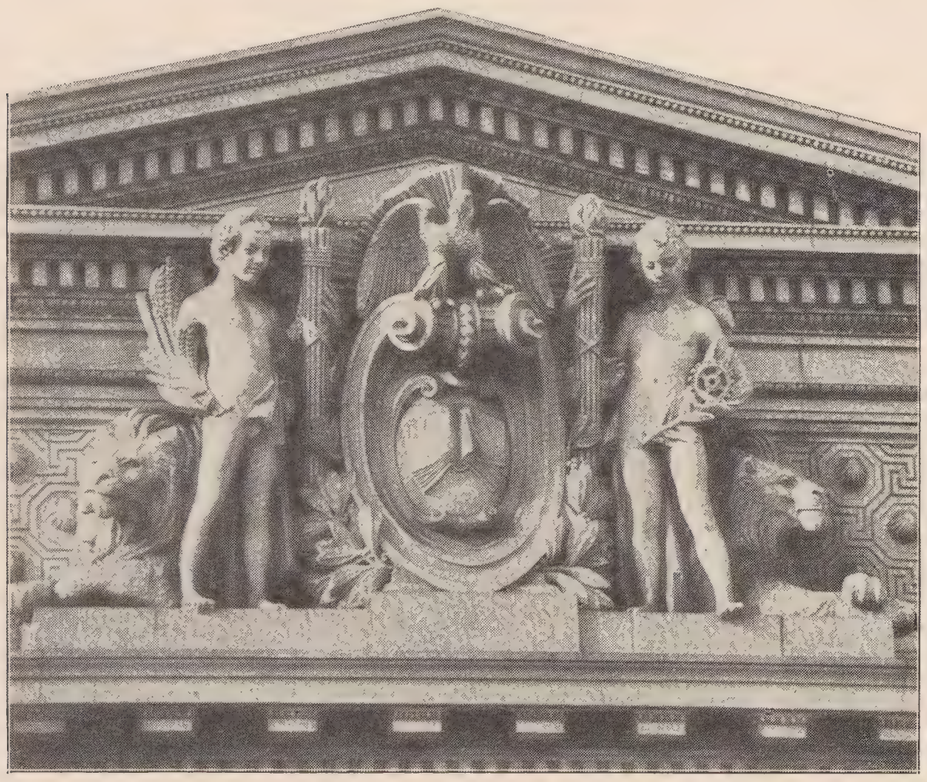
(4) The amount of responsibility of an architect extending far beyond the bounds in sight of the careful practitioner ought to have, as it would seem, the effect upon him to not extend his business beyond the limits of his powers, a fashion at present so much in vogue. It seems to be kept out of mind that in this manner the business of an architect is reduced, more or less so, to that of a common tradesman. Architecture ought to be upheld as a profession, but it will and can not be regarded so by the public and even by the courts. Therefore it is required, as a paramount matter of ethics, though the control of it would be somewhat difficult, that the architect should conscientiously restrict himself to an amount of work which he can *readily oversee and call it* HIS *work*. The truly *professional* architect has this plain duty upon himself. He is bound to cut his business with the same scissors which cut that of a lawyer and a physician. It would also follow that he should rigidly abstain from any sort of competition, public or private, which is not had under a code established by the Institute. Any sort of reckless competition has the effect — and can have no other — of stamping the business of the architect as an unprofessional one.

THE TALLEST BUILDING IN CHICAGO.

THREE hundred and ninety-two and one-half feet above the pavement of Michigan avenue, Chicago, stands a double-life-size figure representing Progress. It is a female form of gilded copper, and revolves as a weather vane. Visible in clear weather from all parts of the city, and from a long distance on the lake, this unusual apparition has challenged the attention of several million people since it first made its appearance a few weeks ago. It has called especial attention to the new Montgomery Ward & Co. building, of which it is the crowning feature.

The design of Richard E. Schmidt may be described as a tower — the highest structure in this country except the Washington Monument and the Philadelphia City Hall — surrounded on three sides by an office building — an office building designed for the occupancy of one firm only. The tower was naturally suggested from the fact that the building fronts toward the lake, and that the view in that direction will, in all probability, never be obstructed.

The ordinary practical difficulties of construction of such a high tower were further augmented by the comparatively narrow frontage on Michigan avenue, only eighty-six feet. Forty feet



FRONTON BY PHILIP MARTINI.

square at the base was the proportion decided on for the tower. The foundation soil being uncertain, about twelve hundred 50-foot 15-inch Norway pine piles were driven to sixty-eight feet below street grade, each to support an estimated load of twenty-five tons. These piles were then capped with steel and concrete. On this foundation was erected a twelve-story steel, fireproof building.

The building being designed for the storage of heavy merchandise, as well as for office purposes, an exceptionally heavy construction was required. Every square foot of space was calculated for a live load of three hundred pounds. This heavy floor load, in addition to the tower loading, required some very heavy columns, the largest having a cross section of 177.7 square inches in the first story, or nearly 1¼ square feet of solid steel, weighing 605 pounds per lineal foot of column.

"PROGRESS," BY J. MASSEY RHIND.

The fireproofing is absolute. The maple floors are the only wood in the building. Even the window frames throughout are of metal. In the tower there is no wood whatever, the floors being of colored cement, laid in small squares.

The exterior presents a pleasing and symmetrical appearance. The base of the building, consisting of the three lower stories, is of white Georgia marble, laid in rusticated courses. The eight stories above are designed as the shaft, and the twelfth story as the capital. All of these and the tower are constructed of mottled buff brick and light terra-cotta.

The use of terra-cotta permitted a range of ornamentation which would not have been possible otherwise, and the architect has improved upon this opportunity by enriching the structure with modeled terra-cotta by the best artists. Some excellent marble carvings are also in evidence. The motif for much of the ornamentation has been taken from the indigenous plants, birds, fishes, etc. The fish panels in marble represent pike, salmon, muskellonge and trout; of birds, there are pheasants, swallows and cranes. The bronze floor panels represent corn, wheat, rye, millet and all the grains.

The tower has the general characteristics of the Italian Renaissance. The superstructure combines all the essentials of modern architectural style, skilfully worked out. The main entrance is through a marble portico, pedimented, in which is a marble fronton, modeled by Ph. Martiny, of New York, consisting of two lions and two youths on each side of a large shield. For the tower a most effective ornamentation was designed in the golden tile with which the panels are filled. The gold is fired on terra-cotta, and presents a very brilliant appearance, changing with every light, but brightest when the sky is clouded. The gilded copper weather-vane figure previously referred to caps the climax of the ornamentation. It is the work of J. Massey Rhind, of New York.

The requirements of this building were peculiar, as it was designed for permanent headquarters for a mercantile business which embraces perhaps the largest line of merchandise ever assembled beneath one roof. The mechanical plant, therefore, was of first importance. It furnishes power, light, heat and water for three-quarters of the adjoining square. The plant consists of water-tube boilers, two vertical compound Allis engines, four dynamos, high-duty pumps, triplex pumps, Adams patent sewage ejector, carbonic acid ice machine for cooling drinking water and circulating pumps for same, electric passenger elevators, high-pressure hydraulic freight elevators, continuous chain elevators, fan system of heating and ventilating, link-belt conveyors, ash conveyors, artesian well pumps, sewing-machines, etc.

Considered with reference to its appropriateness from the standpoint of location, purpose, symmetry, fireproof qualities and details of construction and ornamentation, the Montgomery Ward building is well worthy of special study.

The George A. Fuller Company, of Chicago and New York, were the contractors for the entire building. This company needs no introduction to our readers. It was the pioneer in the new constructional movement whereby every detail of a great building is put into the hands of a single firm of contractors instead of being let piecemeal to the subcontractors direct. A few years ago this method of erecting large structures would have been considered impracticable. The architect would have advertised for bids in the several lines of constructional work, and his superintendent would have been kept busy overseeing the contractors. All this is now changed. A single contractor, a reponsible and efficient company, undertakes the entire work and carries it through successfully without any responsibility or worry devolving on the architect or owner. This is the modern method, and it is the method of which the George A. Fuller Company is the most conspicuous exponent.

The Montgomery Ward & Co. building was contracted for entire by the George A. Fuller Company, and its every detail was directly under its care and supervision. The result of this intelligent supervision by a single company is seen in the completed and harmonious whole, which testifies both to the wisdom of this method of construction and to the fidelity and ability of the constructors. Not only have the usual demands for the best workmanship been complied with, but the work has been executed throughout to the complete satisfaction of all concerned.

ANOTHER SUBSTITUTION OF IRON FOR WOOD.

As previously stated, the floors are the only wood in the building. Even the window casings are of metal, as well as the window frames. This might seem to some to be a useless precaution on sides of the building not directly exposed to fire danger, but the general plan of absolute fireproofing called for the best of everything in this line and the best was provided. The windows are of plate glass set in hollow metallic frames, and this plan of construction has been used throughout in the most intelligent and efficient manner to insure positive protection from the spread of fire. It will be readily seen that this feature may become at any time of the highest importance if a fire should break out in merchandise stored at a point above the reach of the street hose, and in any case it adds immensely to the value and security of the building.

The standard construction of Voigtmann automatic closing and locking windows has been used. The iron frames were set in the masonry while in process of erection, being held by a flange sunk to a depth of two inches in the brick and terra-cotta. They are dust and weather proof, and are affected only slightly by contraction and expansion.

The feature of special interest in this connection is the use of iron in place of wood frames for the setting of the plate glass on street sides. This construction is well exemplified in the Montgomery Ward & Co. building, where it has been applied with perfect success. This is a very valuable adjunct to Messrs. Voigt-

BRONZE FLOOR PANEL.

mann & Co.'s regular business of metal frames and sash for carrying wire glass, and has proved to be entirely satisfactory. The incorporation of the Geisey pivot into the metal frames and sash, which allows the window to be easily opened for ventilation and cleaning, was the final step in the elimination of all wood from exterior construction.

The following letter conveys an idea of the appreciation in which the construction of this form of window is held by the architect and owners:

CHICAGO, November 18, 1899.

Messrs. Voigtmann & Co., 125 Ontario street, City:

GENTLEMEN,— The 326 hollow metal pivoted sash and hollow metal window frames, provided by you for Montgomery Ward & Co.'s new building, Madison street and Michigan avenue, in this city, are very satisfactory in operation and fully meet my expectation. Metal was selected for the window frames and sash to avoid the shrinkage of wood, and to increase the width of the glass for a given opening to the maximum width without encroaching on the fireproofing of the columns, and by using sash pivoted at top and bottom we conform with the city ordinance requiring sash, of which both sides can be cleaned from the interior of the building The additional cost of these metal frames over wood frames was so small a percentage that this difference was not considered by the owners.

Yours very truly,
(Signed) RICHARD E. SCHMIDT

Above the three stories of marble commences the tower profile, of brick and terra-cotta, as may be seen in the illustrations. The brick used represent the choice of selection for color and quality of all pressed brick in the Chicago market, and were specially made for this building. The contract for the 250,000 plain pressed brick and the 35,000 ornamental pressed brick used in the building was awarded to the Chicago Hydraulic-Press Brick Company, Chamber of Commerce, Chicago, and to the trueness of the joints and the generally fine appearance of the tower and other parts

BRONZE FLOOR PANEL.

of the building wherein brick have been used, credit is due to the Hydraulic-Press Brick Company, of St. Louis, which manufactured this beautiful mottled pressed brick.

A word relative to the style and color of brick used will not be amiss and perhaps may extend pleasant information to architects and contractors. The pressed and ornamental brick consists of a special kind of fire-clay iron-mottled, having a semi-glazed surface, obtained by setting the brick in the kiln so that the faces are exposed directly to the fire, it making a most effective surface, clean and bright.

This is one of the many varieties of iron-mottled brick manufactured by the Hydraulic-Press Brick Company, at St. Louis, and which are handled by the various Hydraulic-Press Brick Companies throughout the country.

The Montgomery Ward & Co. building is an excellent example of the use of terra-cotta for an exterior finish. The terra-cotta used in this instance was the cream dull enameled in gray speckled color. Its effect on the eye is very pleasing. It is not perfectly smooth and shiny, but is entirely impervious to moisture, can be washed down and will be as clean as when it left the kiln, thus preserving the color in its original integrity.

There is a very gratifying tendency among Chicago business men at the present time toward light colors. Somber browns and dirty grays are destined to be abandoned in favor of enameled terra-cotta in light colors, and a more cheerful aspect of the city will be the result. Nearly all projected structures in the downtown district are to have enameled terra-cotta fronts of the very brightest finish, and the outlook for residence work on similar lines is very good. No doubt in twenty years what may now be properly called "dirty Chicago" will wear a new and cleaner gown.

Heretofore the highest ideal of our building public has been marble, but unfortunately this noble material is not only very expensive but also sure to lose its polish within a few years when exposed to our smoky atmosphere. A further drawback is its perishable character when exposed to fire. There is the same objection to the use of Bedford stone, which, although otherwise of excellent quality and comparatively very cheap, crumbles away when exposed to heat. But the greatest drawback to any ordinary material in use as exterior finish is that it is dirty and can not be readily cleaned. That this is not necessary has been demonstrated conclusively by the Northwestern Terra Cotta Company in its completed work on this building. It is evident that this essential of cleanliness and brightness is of the utmost importance in a city like Chicago, where the extreme height of the buildings and the dense smoke necessitates the use of the brightest light-reflecting material.

The ornamental bronze and iron work in the Montgomery Ward & Co. building was made at the F. P. Smith Wire and Iron Works, Chicago. Of exceptional merit are the bronze floor plates in the front entrance, which were designed by H. G. M. Garden, and represent the different products of the farm, as wheat, corn, oats, etc.; also the large floor plate representing "Commerce." We note also the other conspicuous bronze-work of the front entrance, including the solid bronze folding gates and the solid bronze sign over the entrance.

There was also furnished eleven bronze floor plates, the ornamental solid bronze kick plates, and the bronze lining of the revolving door entrances; also the ornamental iron stairs, the fire-escapes, which are truly architectural in design and workmanship, the ornamental elevator enclosures for two stacks of passenger elevators, the ornamental grills and bronze wickets for office partition, all the wire partitions, the iron-work for box elevators, the iron railing on the tower, the patent horizontal folding gates, and the Meeker elevator doors for all freight elevators. All of this work has called forth unstinted praise from such of the architectural profession as have seen it, and it is enough to say that it was executed in the best style of this well-known company.

An interesting feature of the building is the figure of Progress at the top of the tower, acting as a weather vane, and which is illuminated at night by four powerful multiplex reflectors placed at the four corners of the tower under the figure, flashing brilliant rays of light on the polished copper of which the figure is constructed.

The shafts of light from the reflectors are properly trained by means of hinge and socket hangings. These powerful reflectors were furnished by the W. R. Garton Company, Chicago.

THE CONVENTION ROUTE.

AS usual, when there is a convention of the American Institute of Architects at Washington, the favorite route from the West is via the Big Four or Monon Route, from Chicago or St. Louis to Cincinnati, and east from there by the incomparable Chesapeake & Ohio. This superb road has a more picturesque route and passes through more scenes, grand as to scenery and historical as to places, than any other road in the country. No one who has looked from a train gliding smoothly under frowning cliffs along the rapid courses of the big and little Kanawhas, across the Allegheny and Blue Ridge mountains and down into the valley of the Shenandoah ever forgets the experience. It is the one route upon which the observation car is appreciated from sunrise to sunset, and far into the night the white foam on the rapids, the burning coke-fires or the glint of moonlight on rocky or wooded heights are watched by the traveler, for such scenes are seen in their wild beauty on no other line as they are from Cincinnati to Washington over the Chesapeake & Ohio.

PAINTS IN ARCHITECTURE.

THE COST OF PAINT.

THE saving that can be effected by selecting a cheap paint in preference to a good one is so insignificant an item in the total cost of a building that it is not worth consideration by the architect. The cost of the labor required to apply such a paint is the same as that for the best grade. The difference then resolves itself into a matter of a few cents per gallon, and will scarcely amount to more than $5 or $10 on an ordinary house. The difference in value received, however, means at least the cost of one extra job of repainting every ten years.

There is no paint so good that we could not imagine a better, but being forced to put up with the best available, we can save the client the cost of that extra job of repainting, for an original outlay that he will not feel, and still save him something over the cost of the most expensive paint. For the most expensive paint is not necessarily the most satisfactory.

It is generally admitted by the largest regular consumers of paint, such as railway companies, shipbuilders, etc., that the most economic paint (and economic in this sense means that which gives the best results for the least money) is a combination based on zinc white, with enough lead to give satisfactory opacity. Most of them require also about one-third the total pigment to be some inert material, such as sulphate of lime, barytes, or silica. Such paint, while costing more than a cheap emulsion, is cheaper per pound than any other form of straight linseed oil paint, and certainly lasts longer. It has also the advantage of holding color better and of covering more surface per pound. The saving in material is anywhere from twenty to thirty-five per cent.

Charles Jourdain.

NEW PUBLICATIONS.

CHURCHES AND CHAPELS; THEIR ARRANGEMENT, CONSTRUCTION AND EQUIPMENT. By F. E. Kidder. Second Edition, Revised and Enlarged. New York: William T. Comstock, 1900. Price, $3.

The above title fairly describes the contents of this book, though of course it is only the peculiarities of church construction that are considered, and not of construction in general, even when applied to churches. There are, however, many useful details, both of construction and arrangement, etc., given. Its principal value comes from the fact that it exhibits the present and modern arrangement of churches, especially of the non-Catholic or non-Episcopal ones. It not only gives the planning of the building proper, but also of what would be termed "furniture and fixtures" if the building were devoted to business purposes. There are a number of remarks on matters preliminary to the commencement of the building and the general requirements thereof, including Sunday-schools; also on the seating, organ, stained glass, heating and ventilation, clocks, etc., and we may say that they are generally correct and exhibit a desire on the part of the author to furnish lucid information upon attainable objects. He appears to have taken great pains to give correct information, although, when treating of so many matters, much of what is said is necessarily an outline. His writing is also modest in tone, and although what is said is well said and appropriate, yet it has not the air of a superior person attempting to write down to the apprehension of his readers. To any one interested in such subjects the book is interesting in many respects. There are some subjects which might have been added to and more fully dealt with, and some few minor matters about which we could scarcely agree, but none of importance, and therefore we are unable to point out points of special excellence, for it is all good. It will be particularly useful to young architects and to building committees; to them and to others interested we commend it.

CORRESPONDENCE.

The following letter, while something of a personal character, pertains to a matter that so generally concerns the profession, and the statements are so authoritative, that we think it imperative that the entire statement be printed and the conduct of the Mexican Government officials spoken of may be given the widest publicity possible.— Ed.

New York, November 25, 1900.

Editor Inland Architect:

I have had an experience this summer, which you, as the friend of architects and a purveyor of items of interest, I think, should know.

The Mexican Government had sent certain postoffice officials to visit the principal countries of Europe and America to study postoffice buildings, and concluding that after all ours were the best arranged and more suitable to their institutions, went to the Superintending Architect in Washington and asked him to design for them the general and local postoffice building which they proposed to erect in the City of Mexico. This, Mr. Taylor told them, he could not do, but I, as his predecessor (and class-mate), was thoroughly well-informed on the subject and amply equipped to serve them, and if arrangements mutually satisfactory could be made, he would furthermore agree to give me free access to any desired material at his disposal and would do all in his power to contribute to the success of the building. He also invited Mr. A. W. Brunner to be associated with me in the matter, but as Mr. B. had already arranged for the summer in Europe the whole of the business devolved upon me.

In Washington, with Mr. Taylor and the Mexican ambassador, it was understood and agreed that for a certain (very moderate) sum preliminary drawings would be furnished to the Mexican Government, and *if they were satisfactory* we were to be intrusted with the preparation of the working drawings.

Thinking it would not only be wiser, but more courteous to present the drawings in person, I went to Mexico early in August, taking letters to President Diaz, to certain members of his cabinet and to other prominent citizens. I remained there *two months;* from time to time answering propositions of varying requirements and for equally varying compensations in case they were carried out. But, unfortunately, although I knew my postoffices (for I had been identified more or less with about seventy-five of them), I did not know the Mexican and I had done the preliminary work only too thoroughly — giving a number of alternative drawings for such matters as might be susceptible of more than one interpretation and supplementing them by a written description and an outline specification. At the meeting with the Postmaster General, the Minister of Finance and another official, I went even further into the items of materials, of expense and of administration — of how the building might be enlarged (in view of the very great growth of postoffice business of the country), etc., and then when they had received about all the information they thought was required just then — they declared that *"the Government insists upon its right to entrust the construction to Mexican engineers."*

Shortly afterward I discovered that they had never *at any time* intended to do anything else than to get some one to show them how a postoffice should be arranged to the best advantage of the service and then have their own men work up the scheme. I also discovered that this was not the first time they had been guilty of such questionable behavior. Two years ago they had a competition for a parliament house (or Chamber of Deputies) — open to the world. Although they had offered three prizes, when the drawings were opened they declared that no one was entitled to the first prize, that the second prize should be given to a Mexican, and the third prize to an Italian — whose design was really the *best of all.* Then they turned the Mexican loose among *all the drawings,* and told him, "*Now* design us what we want!" — giving him a chance to study up on design — and then sent him to Europe to study up on construction!

Now contrast this shrewd trick with the behavior of the officials of another foreign nation — who are equally anxious to profit by the experience of the progressive and "up-to-date" American architect. About four years ago M. Katayama, the Japanese imperial architect, was required to design a palace for the Crown Prince of Japan. He made his preliminary studies, brought them to Mr. Bruce Price for criticism, and returned to Japan. Last year he returned to New York with the working drawings and again asked Mr. Price to criticize them. That he might familiarize himself with some of our handsomest interiors in New York, I undertook (through the courtesy of Messrs. McKim, Mead & White and other architects) to get him the *entree* to some of the

most notable clubs and private houses, and Mr. Price, while giving this work much of his own time, virtually placed the office at his disposal. Before leaving M. Katayama gave an elaborate dinner to the fellows in the office who had worked on the drawings and presented me with a rare bit of lacquer. He requested Mr. Price to fix his own charge, which was paid promptly and with thanks!

For the warning (or benefit) of American architect, sculptor or painter, I beg that you will let these facts be known.

Very truly, WM. MARTIN AIKEN.

ASSOCIATION NOTES.

THIRTY-FOURTH ANNUAL CONVENTION A. I. A.

The thirty-fourth annual convention of the American Institute of Architects will be held at Washington, D. C., December 12 to 15, inclusive. An elaborate program has been prepared and a large attendance of members is expected.

LOUISIANA ARCHITECTURAL ASSOCIATION.

The regular meeting of the Louisiana Architectural Association, November 19, was devoted to the discussion of competitions, and in general the miscellaneous competition for buildings, especially of small cost, was regarded as detrimental to the profession; that all competitions should be according to some equitable code and that they should be limited. The following set of rules were formulated to be submitted to the next regular meeting for adoption:

"First — That the association disapproves of contests on the ground that they are wasteful.

"Second — That no member of the association shall enter any contest in this city for the plans of any building to cost less than $25,000.

"Third — That no member of the association shall enter any contest in this city unless it be a closed contest, and the schedule therefor and the judgment thereof shall be under competent expert advice."

There was a very general expression by the gentlemen present that the conditions of the recent contest for the plans of the new library were all that could be desired.

THE CINCINNATI CHAPTER, A. I. A.

The Cincinnati Chapter of the American Institute of Architects held its regular monthly meeting November 20, 1900.

The following officers were installed for the ensuing year: President, G. W. Rapp; vice-president, A. W. Hayward; secretary, George M. Anderson; treasurer, George W. Rapp.

A program of the papers to be read during the winter was distributed, and a report made that ten exhibits had been sent to the Circuit Exhibition of "The Architectural League of America."

Messrs. Rapp, Drach and McLaughlin were appointed delegates to the Convention of the American Institute, to be held in Washington in December.

Mr. Samuel Hannaford read a most interesting and instructive paper on "Contracts," which was followed by general discussion.

MEMPHIS ARCHITECTURAL CLUB.

A club has been formed at Memphis, to the membership of which architects, builders and all those engaged in the allied trades are eligible to membership. Handsome clubrooms have been fitted up, the decorations of the several rooms being suggestive of the avocations of the members. The opening of the clubrooms occurred on November 9, and a large number of members and invited guests were present. President Cyrus Johnson said that the Architectural Club was patterned after similar clubs in all large cities. Its aim was to promote building, perpetuate the art which they represented, preserve the records, plans, drawings and specifications of architectural work of the past, and bring about harmony, coöperation and a complete understanding between architects and others interested in building.

DETROIT ARCHITECTURAL CLUB.

At the annual meeting of The Detroit Architectural Club, held November 5, glowing reports were read from all departments. The treasurer stated that there is a good balance on hand, and with the prospects of an increasing membership the future is exceptionally bright.

The most important business was the selection of new quarters, the present room at 10 West Columbia street having been outgrown. A large, airy room on the top floor of the Union Trust building has been secured and within two or three weeks' time the club will move in. Plans are being made for expensive decorations, and it is hinted that when completed the clubroom will be one of the finest of the kind in the State. The annual election of officers resulted as follows: President, Francis S. Swales; vice-president, C. F. J. Barnes; treasurer, J. J. Frauenfelder; director, George H. Ropes. The president will appoint the committees before the next meeting.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES.

Barr Ferree, president of the Department of Architecture of the Brooklyn Institute of Arts and Sciences, began a free public course of six illustrated lectures on "The Great Buildings of the World," at the Drexel Institute November 13, to be continued on successive Tuesdays and Thursdays at 4 P.M., until completed, Thanksgiving day excepted. The subjects are: "Venice: The Church of San Marco and the Doge's Palace"; "Florence: The Cathedral and the Mediæval City, Dante and Savonarola"; "Rome: St. Peter's and the Palace of the Popes"; "Paris: History and Legend in Notre Dame of Paris"; "Versailles: The Palace and Gardens of Versailles, Louis XIV and the French Revolution"; "London: The Palaces and Shrines of Westminster, Westminster Abbey and the Houses of Parliament." Each building, or group of buildings, is taken as the central thought, and around it Mr. Ferree aims to reproduce the life and times of the period of its construction.

ARCHITECTS OF NEW JERSEY.

An association of architects was permanently formed at a meeting held at Jersey City November 16, which has applied for Chapter membership in the American Institute of Architects, and which will apply for a State charter. The officers elected were: Thomas Cressy, of Newark, president; Charles P. Baldwin, of Newark, vice-president; Albert Beyer, of Hoboken, second vice-president; Hugh Roberts, of Jersey City, secretary; and Herman Kreitler, of Newark, treasurer.

The delegates elected to attend the A. I. A. Convention, at Washington, were W. H. Ely, Herman Kreitler, of Newark, and George W. Vonarx, of Jersey City.

Architects in the State are eligible to membership.

NORTH CAROLINA ARCHITECTS.

The architects of North Carolina met at Raleigh on October 26 and formed a temporary organization with R. S. Smith, of Asheville, president, and Charles Pearson, of Raleigh, secretary. Messrs. Smith, Pearson and Rose were appointed a committee to secure a State Chapter charter from the American Institute of Architects. The next meeting will be held at Charlotte on December 27.

ILLINOIS CHAPTER A. I. A.

At the regular monthly meeting of the Illinois Chapter A. I. A., on November 26, the guest of the evening was Mr. C. R. Ashbee, of London. Mr. Ashbee, who is distinguished as an architect, and is director of the Guild and School of Handicraft, is visiting the different cities of the United States in behalf of the preservation and conservation of architectural creations of the past, with the view to interest individuals and associations in the work of an association formed for the purpose in England. Mr. Ashbee was afterward the guest of The Chicago Architectural Club, which was enjoying its Thanksgiving dinner in true bohemian style. His reception was enthusiastic and at the close of his remarks the band of stringed instruments present played and the entire assembly rose and sung "God Save the Queen."

WASHINGTON ARCHITECTURAL CLUB.

At the meeting of the club in its rooms in "The Octagon," November 24, Mr. Theodore F. Laist delivered a talk, illustrated by lantern slides, upon the Paris Exposition. A paper was also read contributed by Mr. O. S. Simmonson, superintendent in charge of the United States Government building at the Pan-American Exposition, on the composition of "Staff."

THE ARCHITECTURAL LEAGUE OF AMERICA.

At the monthly meeting of the executive board of The Architectural League of America, held at Chicago November 6, were appointed the members of the Committees on Ethics and Competition Code and Current Club Work, thus completing the standing committees of the League.

The members of the five standing committees and the organizations to which they belong, are as follows:

"Ethics and Competition Code," The Architectural League of New York: Walter T. Owen, chairman, Julius F. Harder, Percy Griffin.

"Current Club Work," The St. Louis Architectural Club: E. J. Russell, chairman, E. G. Garden, W. B. Ittner.

"Exhibition Circuit," The Cleveland Architectural Club, Victor E. Rondel, chairman, Charles S. Schneider, Wilbur M. Hall.

"Foreign Exhibit," The T-Square Club, of Philadelphia: Lawrence V. Boyd, chairman, Louis Calvert, Gilbert L. Hindermeyer.

"Education," John Watrous Case, chairman, The Detroit Architectural Club, Albert Kelsey, The T-Square Club, Philadelpha; Prof. J. M. White, The Architects' Club, University of Illinois, Urbana, Illinois.

"Publicity and Promotion," The Chicago Architectural Club: Henry K. Holsman, chairman, William K. Fellows, Walter B. Griffin.

The members of the special committee on Municipal Improvement are the following: H. K. Bush-Brown, chairman, Architectural League of New York; John M. Carrère, Beaux-Arts Society, New York; F. W. Striebinger, Cleveland, Ohio; Dwight H. Perkins, Chicago, Ill.; Edgar V. Seeler, Philadelphia, Pa.; Charles M. Robinson, Rochester, N. Y.; Mr. Howe, Boston, Mass.; George Cary, Buffalo, N. Y.; Edwin Henri Oliver, New Orleans, La.

Mr. Victor E. Rondel, chairman of the Committee on Exhibition Circuit, reported that an exhibition circular had been sent to all the clubs who were to receive the circuit drawings, and that the dates of exhibition had been scheduled as follows: Philadelphia, January 5-21; Cleveland, January 28-February 9; New York, February 16-March 9; Washington, March 15-21; Chicago, March 28-April 15; Urbana, April 20-27; St. Louis, May 6-20; Cincinnati, May 27-June 7; Pittsburg, June 13-20; Toronto, June 15-July 1.

OBITUARY.

THOMAS P. LONSDALE.

After an illness of only a few days, Thomas P. Lonsdale, one of the prominent architects of Philadelphia, died November 9, at his home in that city.

Mr. Lonsdale was born at Norristown, in 1854, and when nine years old was admitted to Girard College, from which he was graduated in 1871. He never ceased to feel a deep interest in his alma mater, and for the last six or seven years, up to the time of his death, he was president of the Girard College Alumni Association. Soon after his graduation he entered the office of James H. Windrim, under whom he studied architecture. In 1885 he began business on his own account.

Mr. Lonsdale has been the architect of numerous buildings erected in Philadelphia and the State, and also designed a number for other places. Among these were the handsome Pennsylvania State building at the Chicago Exposition in 1893. If Mr. Lonsdale had a specialty it was in the designing of churches. He designed Grace Baptist Church, Temple College, the Third Regiment Armory, the building of the Pennsylvania Railroad Department's Y. M. C. A., Methodist Episcopal Church of the Covenant, Methodist Episcopal Orphanage, Methodist Episcopal Hospital, Albert Barnes Memorial, Catholic Church of Our Lady of Lourdes, Overbrook; the new hall of the Spring Garden Institute; police station at Sixty-fifth street and Woodland avenue; Fairhill Methodist Episcopal Church, and many other churches and public buildings.

Mr. Lonsdale married Miss Annie Wismer, of Norristown, who survives him with one daughter. He was director of the Spring Garden Institute, secretary of the Board of Trusts of the Methodist Episcopal Orphanage and a member of the Masonic fraternity and the T-Square Club. The press reports state that Mr. Lonsdale was a member of the American Institute of Architects, but his name can not be found in the lists of that association. His ability as an architect and standing as a citizen makes his loss one of moment, both to the profession and to his city.

OUR ILLUSTRATIONS.

Detail of Exterior, Milwaukee Public Library. Ferry & Clas, architects.

House of Elliott Jones. Root & Siemens, architects, Kansas City, Missouri.

Interior View, Church of the Divine Paternity. W. A. Potter, architect, New York.

Entrance Detail Commercial Building for Montgomery Ward & Co., Chicago. Richard E. Schmidt, architect.

Sketch, English Country House, rendered by Samuel M. Hitt.

Residence of Charles S. Hills, St. Louis, Missouri.

Barnett, Haynes & Barnett, architects. The following full-page views are shown: Exterior, Main Hall, Parlor.

Model of Monument to the Heroes of the Independence, Mexico. Guillermo De Heredia, architect; Enrique Alciati, sculptor.

Cote Brilliante Presbyterian Church, St. Louis, Missouri. Weber & Groves, architects.

New Buildings for the University of Chicago. Shepley, Rutan and Coolidge, architects. The University is progressing in the proposed plans of the institution of uniting the present buildings in one inclosure on the campus. Preliminary plans have just been completed for a new group of buildings to be erected on the northeast corner of the campus at Fifty-seventh street and Lexington avenue. The new buildings, as planned, will cost about $400,000, and will be erected principally for the promotion of the social side of life at the University. The group will include a dining-hall, café, commons, founder's tower, a clubhouse for male students and a large assembly hall. The buildings are to be built of limestone and the architecture will be similar to that of the present buildings of the University. The northeast building of the group, on Fifty-seventh street, will adjoin the zoölogical building and will contain a dining-hall designed to seat four hundred. At one end of the hall will be a raised platform for the tables of the professors, while on the side next to the campus will be a one-story café, 134 by 30, provided with lunch counters for furnishing the students with quick lunches in the middle of the day. East of the dining-hall, and also fronting on Fifty-seventh street, will be the founder's tower. It will be 30 by 32 feet, 125 feet high and will probably be provided with chimes. The tower will serve as a center for the architectural features of all of the University buildings. On the corner and adjoining the tower, a clubhouse will be built 150 feet long and 40 feet wide. The first floor will contain the entrance and staircase hall and reading and billiard rooms. On the second floor quarters will be furnished for the various literary societies and fraternities, also card-rooms, writing-rooms, trophy-rooms, etc., while the third floor will be given up exclusively to a hall for dances and other social pastimes. South of the clubhouse, on Lexington avenue, will be constructed an assembly hall 150 feet long and 36 feet wide. It will be entered by two lobbies, one on the campus side and another on the Lexington avenue side. The main floor of the assembly hall will have a seating capacity of one thousand, while the gallery will seat five hundred. At the south end of the hall will be a stage seating two hundred. The main entrance to the buildings will be from the campus through an open cloister, which will have direct communication with all the buildings. The type of architecture will be that of the old English collegiate, Gothic style.

Photogravure Plate: View of Residence of W. E. Kelley, Oconomowoc, Wisconsin. Howard V. Shaw, architect, Chicago.

Corrections: Elmer Grey was architect of House of Frederick R. Buell, Milwaukee, shown in the October number and attributed to Ferry & Clas.

The Lindell Avenue Methodist Church, an interior view of which was shown in the November number, was the joint product of T. C. Link and A. F. Rosenheim, who were in partnership at the time the building was executed.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure Edition.

Residence of W. E. Kelley, Oconomowoc, Wisconsin. Howard V. Shaw, architect, Chicago.

The following views are shown: Two Exterior Views; View in Hall · View of Boathouse.

First Presbyterian Church, Davenport, Iowa. Gottschalk & Beadle, architects, Galesburg, Illinois.

General Exterior View, Commercial Building for Montgomery Ward & Co., Chicago. Richard E. Schmidt, architect. A double-page plate.

MOSAICS.

ARCHITECTS who use stereopticons have probably heard of accidents in the use of the calcium light. One recently occurred in a church near Chicago in which the operator nearly lost his life and the bill for repairs for the church was large. On investigation it was found that the regular untempered steel tanks, of which there are over three thousand in use nightly in this country, have never been known to explode. The operator in question bought a thin, galvanized iron tank that had been used for hydrogen and had cotton soaked in gasoline in the bottom. He used it for oxygen and the natural result followed. Moral: Buy your gas from the regular purveyors and you will be safe.

IN the suit of architects Howard & Caldwell, against the Newark (N. J.) Board of Education for a balance due upon their fee of five per cent on November 22, the jury awarded a verdict for the full amount sued for, with interest from January 10, 1899, to February 9, 1901, the date of the next term of the Supreme Court. The testimony showed that the plans and specifications had been complied with and contractors had been repeatedly urged to comply with terms of contract. The Board tried to show that another party, probably the architects' superintendent on the work, was young and inexperienced, while the architects' lawyer contended that they had used "reasonable care and diligence," and the superintendent's youth did not disqualify him from looking after the work properly.

ACCORDING to the annual report of John K. Taylor, supervising architect of the treasury, the competitive system authorized by the act approved February 20, 1893, has had a practical test during the past year, in its application to three cases, and the results have been satisfactory, so far as designs and the preparation of working drawings and specifications are concerned, but in the matter of actual construction and superintendence of the works so favorable a statement can not be made. It is, therefore, suggested that the department, if legally warranted, should limit the services supplied by the architect successsful under the competition to the furnishing of the design, the working drawings, full size details and specifications, leaving the superintendence of actual construction under the charge of the Supervising Architect's office.

ONE of the curiosities of architecture in England is the house erected about three hundred years ago by Rushton, in Northamptonshire, by Sir Thomas Tresham, a Roman Catholic, who wished by his design to typify the Trinity. It is all three; has three sides, three stories, and three windows on each flat, each of them in the shape of the trefoil — the three-leaved shamrock. Where the roofs meet rises a three-sided pyramid, terminating in a large trefoil. The smoke escapes from this chimney by three round holes on each of the three sides. The building is almost covered with mottoes and carvings, three Latin inscriptions, one on each of the three sides, having thirty-three letters in each. Three angels on each side bear shields. Over the door is the text from the Vulgate, "There are three that bear record." Inside the house each corner is cut off from each of the three main rooms, so that on every floor there are three three-sided apartments. It is hardly necessary to add that the house has ceased to be inhabited.

AT Bistritz, in Siebenburgen, the building of a large residence for the official Forest Commissioners has been confided by the Austrian Government to a lady. Fraulein Erika Paulas, who is thus honored, obtained last winter her diploma as architect, and has been chosen from many candidates for this important work. She commenced at seventeen the study of architectural drawing, then passed the masons' examination with success at Klausenburg, and gained her diploma as architect last winter at Budapest. She has encountered much opposition and persecution in her profession. A deputation connected with the building trade actually petitioned the Minister of Public Works to prohibit Fraulein Paulas from entering for the examination. This petition remained unnoticed and she passed with unusual brilliancy. Twenty buildings have already been entrusted to her, and she has in every case afforded satisfaction to her employers. On the completion of the Bistritz Government House, it is the intention of Fraulein Paulas to enlarge her experience by traveling in the interests of her profession in foreign countries.

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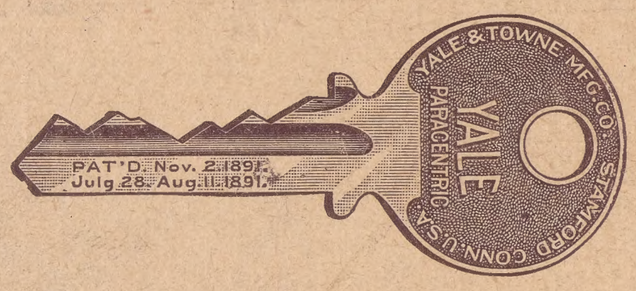

The Passing of a Familiar Form.

The original Yale Key, with its Trefoil Bow, was not copyrighted and is now generally used in all imitation Yale Locks.

Therefore, to protect the public against deception, we have abandoned the Trefoil Bow in connection with Yale Locks and substituted for it the new form of Key Bow shown above.

The Yale Lock and Key are interestingly described and illustrated in a 12-page folder which will be sent on request.

"Artist and Artisan," "Cut Glass Knobs," "Yale Night Latches," "The Vulcan Locks," and other brochures of interest to Architects may be had on application.

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